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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,350

07/08/2003

Masaaki Goto

1046

7857

27649

7590

01/20/2006

MICHAEL TOBIAS

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EXAMINER

CARPIO, IVAN HERNAN

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,350

Applicant(s)

GOTO ET AL.

Examiner

Ivan H. Carpio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-16 is/are pending in the application.  
4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 and 11-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 7-8-2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 11/03/2005 have been fully considered but they are not persuasive. The applicants first argument in regards to claim 1 is that Choon (5608188) does not disclose that the lip extends outwards from an outer surface of the wall structure by 10-500 micrometers because the reference teaches that the typical radius of the lip is .2mm and typical radius refers to radius of curvature and therefore does not read on the claim, the examiner respectfully disagrees. The Choon reference reads on the limitations of claim 1 even if the typical radius refers to the radius of curvature, by visual inspection of lip 411 of figure 4 we see that the lip is some part of a circle, how much of the circle is not disclosed but even if it were between 5 degrees and 90 degrees of a circle with a radius of curvature of 200 micrometers this would give us arclengths of 17 micrometers to 315 micrometers respectively therefore reading on the claim 1. The applicant's second argument in regards to claim 1 is that a person skilled in the art would receive no motivation from the cited references to combine the lips taught by Choon with the cap shaped lip structure taught by Ito. Respectfully, the combination is not the lips taught by Choon with the cap shaped lip structure taught by Ito, the combination is the entire structure taught by Ito with the lips protruding the distance taught by Choon. The motivation is stated in the office action and furthermore it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In Re Aller*, 105 USPQ 233. The applicants third argument in regards to claim 5 is that Ito

does not teach that the entire inner surface of the lid is provided with solder, the examiner respectfully disagrees. It is clear by looking at figure 5 and column 4 lines 22-23 that Ito teaches that the entire surface is provided with solder because he defines two sides to the lid, side A, the inner surface, and side B, the outer surface and states that surface A is provided with solder.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,3,4,5,6,11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US 6867982) in view of Choon (US 5608188).

With respect to claim 1, Ito discloses a cap-shaped lid for use with a generality flat base to seal an electronic device comprising a top portion (See Examiner's figure), a wall structure extending around an entire periphery of the top portion and having an upper end connected to the top portion and a lower end (See examiners figure), a lip connected to the lower end of the wall structure around an entire periphery of the wall structure and extending outwards from an outer surface of the wall structure, and solder applied to an inner surface of the lid on at least a portion of the lip (Page 7, col. 4, lines

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22-23). However, Ito does not disclose expressly wherein the lip extends outwards from the outer surface of the wall structure by 10-500 micrometers. The Choon reference, However, discloses the lip extending outwards from the outer surface of the of the wall structure by 10-500 micrometers. Ito and Choon analogous art because they are from the same field of endeavor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Ito to have the lips extending outwards by 10-500 micrometers from the outer surface of the wall structure. The motivation for doing so would have been obvious in view of the teaching of Choon in minimizing the size of the components as well as minimizing the space between components. Therefore it would have been obvious to combine Choon with Ito to form a lid with a lip extending outwards by 10-500 micrometers from the outer surface of the wall structure to obtain the invention as claim 1.

With respect to claim 2, Ito discloses lip is curved with respect to the wall structure (Fig. 1A).

With respect to claim 3, Ito discloses that the top surface of the lid is polygonal (Fig. 1A shows a 4 sided lid).

With respect to claim 4, Ito discloses that the wall structure extends substantially perpendicularly from the top surface (Fig. 1B)

With respect to claim 5, Ito discloses that the solder is provided on an entire inner surface of the lid.

With respect to claim 6 and with all the limitations to claim 1, Ito teaches all of the limitations including a cap-shaped lid covering an electronic device and soldered to the

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top surface of the base. Ito does not teach that the cap-shaped lid hermitically seals the electronic device inside the package. It is well known in the art to hermitically seal sensitive electronic devices or components inside a housing for the purpose of protecting them from damaging atmospheric condition. There are many ways this is accomplished by using a suitable adhesive with a closed housing, or in the case of Ito's lid it can be accomplished by laminating the lid covering up the hole (4) and rendering the electronic components hermetically sealed. Note laminating would not affect the integrity of Ito's invention because Ito's lid only requires that there be no metal above particular electronic components/devices in order not to reduce the inductance. It would have been obvious to one of ordinary skill in the art at the time of the invention, to laminate the Ito's lid and thus hermetically seal the electronic device inside the lid, for the purpose of protecting them from damaging atmospheric condition such as moisture.

With respect to claim 11 and with all the limitations of, Ito discloses a lid wherein the wall structure, the top portion and the lip are formed from a single metal sheet (Page 7, col. 4, lines 22-23 and 33-36).

With respect to claim 12 and with all the limitations of claim 5, Ito teaches all of the limitations including that a layer of solder is formed on the inner surface of the wall structure (Page 7, col. 4, lines 22-23). With respect to forming the solder layer by hot dipping, refer to MPEP 2113 this is a product by process and the claim is not limited to the limitations recited in the steps but to the structure implied by the steps, the structure sets forth the claimed invention.

With respect to claim 13 and with all the limitations of claim 1, Ito discloses all of the limitations including that the lip is without openings through which air can pass. Ito does not teach that the top portion is without opening through which air can pass. It is well known in the art to seal sensitive electronic devices or components inside a housing for the purpose of protecting them from damaging atmospheric condition. This can be accomplished by laminating the lid covering up the hole (4) and rendering the electronic components sealed. Note laminating would not affect the integrity of Ito's invention because Ito's lid only requires that there be no metal above particular electronic components/devices in order not to reduce the inductance. It would have been obvious to one of ordinary skill in the art at the time of the invention, to laminate the Ito's lid and thus rendering the top portion without openings through which air can pass and thus sealing the electronic device inside the lid, for the purpose of protecting them from damaging atmospheric condition such as moisture.

With respect to claim 14 and with all the limitations of claim 1, Ito teaches all of the limitations except, Ito does not disclose expressly that the lip extends outwards from the outer surface of the wall structure by 10-100 micrometers. The Choon reference, however, discloses the lip extending outwards from the outer surface of the of the wall structure by 10-100 micrometers. Ito and Choon analogous art because they are from the same field of endeavor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Ito to have the lips extending outwards by 10-100 micrometers from the outer surface of the wall structure. The motivation for doing so would have been obvious in view of the teaching of Choon

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in minimizing the size of the components as well as minimizing the space between components. Therefore it would have been obvious to combine Choon with Ito to form a lid with a lip extending outwards by 10-100 micrometers from the outer surface of the wall structure to obtain the invention as claim 1. See the response to argument section for an explanation. Note also that claim 14 states that the lip extends from the outer surface by 10 to 100micrometers, since the outer surface has many points of reference we can always find some place on the outer surface that measures in between any given range.

With respect to claim 15 and with all the limitations of claim 6, Ito teaches that the lid is connected to the base by a solder joint (column 4, lines 30-33). With respect to forming the solder joint by solder which has flowed downwards from an inner surface of the wall strucutre towards the base, refer to MPEP 2113 this is a product by process and the claim is not limited to the limitations recited in the steps but to the structure implied by the steps, the structure sets forth the claimed invention.

With respect to claim 16 and with all the limitations of claim 6, Ito teaches that the lid has a solder layer formed on the lip and an inner surface of the wall structure (Page 7, col. 4, lines 22-23), and the lid is soldered to the top surface of the base (column 4, lines 30-33) so as to form a hermetic seal by solder in the solder layer. With respect to forming the solder layer by hot dipping, refer to MPEP 2113 this is a product by process and the claim is not limited to the limitations recited in the steps but to the structure implied by the steps, the structure sets forth the claimed invention.



***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CALLED SIGNED  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800